REMARKS

Applicants wish to thank the Examiner for finding claims 3 and 13 to be allowable if said claims are rewritten in independent form.

Claims 1-2 and 7-10, 11-12 and 17-20 were rejected under 35 U.S.C. 102(b) as being anticipated by Nakamura et al (6,114,411). Applicants respectfully traverse this rejection. Nakamura teaches an inkjet printing method with ink composition comprising a thermoplastic resin emulsion. The thermoplastic resin emulsion disclosed by Nakamura is conceptually different from the thermally responsive material taught in the current invention. The thermoplastic resin emulsion in Nakamura has to melt or soften (i.e., the viscosity is lowered as the compound heats) to promote film-forming, as described at column 6, line 1. The very term "thermoplastic" indicates something rendered soft and moldable by heat; see *Grant & Hackh's Chemical Dictionary*, Fifth Edition.

In contrast, the thermally responsive materials disclosed in the present invention increase in viscosity as they are heated and cause significantly higher viscosity in the inks. A thermally responsive material is defined in the current Application as one which causes the viscosity of the ink to increase rapidly when the ink is heated and causes the ink to form a non-fluidic gel at the elevated temperature (page 4, line 19). Therefore, Nakamura cannot anticipate Applicants' invention because the thermoplastic materials described therein are not "thermally responsive" as defined by Applicants.

The Examiner states that Nakamura discloses a thermally responsive material comprising a polyethylene oxide and provides 2 citations. In column 5, lines 40-65 of Nakamura, the examples of a thermoplastic resin disclosed do not include polyethylene oxide and its copolymers. This is reasonable since such materials are not a thermoplastic resin. At column 13, lines 5-15, Nakamura discloses use of polyethylene oxide as a water-soluble high molecular compound to retain a proper moisture retention in the head (column 12, lines 32-52) and prevent ink thickening accompanying the temperature rise in the head (column 12, lines 24-32). This type of additive does not function in any way related to the thermally responsive material utilized in the present invention. To the contrary, the thermally responsive materials in the present invention promote ink thickening at higher temperature.

Claims 4-6 and 14-16 were rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura et al (6,114,411) in view of Gundlach et al (5,888,285) and Takahashi et al (3,981,730). Applicants respectfully traverse this rejection. Nakamura has been discussed in detail above and shown not to disclose thermally responsive materials as defined by Applicants. Gundlach et al describes the use of block copolymers of polyethylene oxide as additives to enhance the viscosity and the stability of the ink. It does not discuss or suggest any thermal responsivity of the materials, nor does it suggest the method of the current invention. There is no indication in Gundlach of a desire for the ink to gel; in fact, in the Summary of the Invention in Gundlach, column 6, lines 24 and 29, it states that it is an object of the invention to provide ink compositions with reduced viscosity. Takahashi describes the use of hot-melt compounds which are solid under normal conditions and which have a melting point of at least 100°C in a thermally transferred printing method. The compounds are not thermally responsive materials as defined by Applicants, nor is the reference directed to inkjet printing. Applicants submit that the current invention is inventive over the above cited references because none of the references, alone or in combination, suggest or disclose the use of thermally responsive materials as defined by Applicants in the method of the invention.

In light of the above remarks, Applicants respectfully request that the claims be allowed.

Respectfully submitted,

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